

JIB-1571\_SequenceListing071511\_ST25.txt  
SEQUENCE LISTING

<110> winter Sederoff, Heike  
Huber, Steven C  
Larabell, Carolyn A

<120> SYNTHETIC PEPTIDES THAT CAUSE F-ACTIN BUNDLING AND BLOCK ACTIN  
DEPOLYMERIZATION

<130> JIB-1571

<140> 10/576,757  
<141> 2006-04-20

<150> US 60/513,275  
<151> 2003-10-20

<160> 30

<170> PatentIn version 3.5

<210> 1  
<211> 15  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic consensus active Zea mays Sucrose Synthase (SuSy)  
peptide

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Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp  
1 5 10 15

<210> 2  
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<223> synthetic peptide derived from Zea mays SuSy1 protein 367-381

<400> 2

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<210> 3  
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<223> synthetic peptide derived from Zea mays SuSy2 protein 357-389

<400> 3

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp  
1 5 10 15

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 <223> synthetic peptide derived from Drosophila melanogaster Actin 2  
 protein and Homo sapiens beta and gamma Actin proteins  
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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
 1 5 10 15

<210> 6  
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 5, and 6 proteins and Homo sapiens alpha Actin protein  
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Glu His Gly Ile Ile Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
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 1 5 10 15

<210> 8  
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<400> 8

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<400> 9

Gly	Asp	Arg	Val	Leu	Ser	Arg	Leu	His	Ser	Val	Arg	Glu	Arg	Ile	Gly
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Lys

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Lys Lys

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<400> 11

Ile	Leu	Arg	Val	Pro	Phe	Arg	Thr	Glu	Asn	Gly	Ile	Val	Arg	Lys
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<210> 12  
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<212> PRT  
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Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu  
1 5 10 15

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<220>  
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<222> (13)..(13)  
<223> replaced Tryptophan residue with Alanine

<400> 13

Gly Ile Val Arg Lys Ala Ile Ser Arg Phe Glu Val Ala Pro Tyr Leu  
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<210> 14  
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<212> PRT  
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<220>  
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<400> 14

Ser Arg Phe Glu Val Trp Pro Tyr Leu  
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<210> 15  
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<212> PRT  
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<220>  
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Gly Pro Thr Leu Lys Arg Thr Ala Ser Thr Ala Phe Met Asn Thr Thr  
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1

5

10

15

Ser Lys Lys

<210> 16  
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<220>  
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Gly Arg Met Arg Arg Ile Ala Thr Val Glu Met Met Lys Lys  
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<210> 17  
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Trp Ile Ser Arg Phe Glu Val Trp  
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 <223> X=noroleucine

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 <221> VARIANT  
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Xaa Arg Arg Ile Ser Ser Val Glu Xaa Xaa Asp Lys Lys  
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1

5

10

<210> 19  
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<220>  
 <223> synthetic peptide of Drosophila melanogaster Actin protein  
 consensus sequence

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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp His  
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His Thr Phe Tyr  
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<210> 20  
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<210> 21  
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<400> 21

Glu Asn Gly Ile Val Arg Asn Trp Asp Asp Met Lys His Leu Trp  
 1 5 10 15

<210> 22  
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 <212> PRT  
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<220>  
 <223> Core minimum block of SS12 sequence required for less active  
 synthetic peptide

<400> 22

Ser Arg Phe Glu Val Trp  
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<210> 23  
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<220>  
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<400> 23

Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu Lys Lys  
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<210> 24  
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<220>  
 <223> SS synthetic peptide C

<400> 24

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro  
 1 5 10 15

Tyr Leu Lys Lys  
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 <223> X=His or Asn

<220>  
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 <223> X= Val or Leu or Ile

<220>  
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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa  
 1 5 10 15

Xaa Xaa Xaa Xaa  
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<210> 26  
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 <223> Motif for a synthetic peptide which causes actin bundling and inhibits actin depolymerization

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 Glu Xaa Gly Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp  
 1 5 10 15

<210> 27  
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 <220>  
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<220>  
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<220>  
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<220>  
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<220>  
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 <222> (7)..(7)  
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 <223> X = Arg, Lys, Asn, or Thr

<220>  
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<220>  
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<220>  
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<223> X = Phe, or Glu

<220>

<221> VARIANT

<222> (11)..(11)

<223> X =Asp, Glu, Lys, Arg, or His

<220>

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<222> (12)..(12)

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<220>

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<222> (14)..(14)

<223> X =Pro, or His

<220>

<221> VARIANT

<222> (15)..(15)

<223> X =Tyr, or His

<220>

<221> VARIANT

<222> (16)..(16)

<223> X =Leu, or Thr

<400> 28

Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa  
1 5 10 15

<210> 29

<211> 13

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<213> Artificial Sequence

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<223> X = Lys, Arg, or His

<220>

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<222> (5)..(5)

<223> X = any amino acid

<220>

<221> VARIANT

<222> (7)..(11)

<223> X = any amino acid

<220>

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<222> (12)..(12)

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<400> 29

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1 5 10

<210> 30

<211> 7

<212> PRT

<213> Artificial sequence

<220>

<223> SS2 and SS12 subsequence necessary for peptide activity

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Gly Ile Val Arg Trp Lys Ile  
1 5